

EA440 AEROSPACE VEHICLE DESIGN  
DESIGN PROJECT  
Professor Rogers

Sample General Performance Specification Sheet

Aircraft Name & Model

Specifications

Powerplant:	Model	
	hp @ rpm	
Recommended TBO		hr
Propeller		
Length		ft
Height		ft
Wingspan		ft
Wing area		ft <sup>2</sup>
Wing loading		lb/ft <sup>2</sup>
Power loading		lb/hp
Seats		
Cabin length	ft	in
Cabin width	ft	in
Cabin height	ft	in
Empty weight		lbs
Gross weight		lbs
Useful load		lbs
Payload w/full fuel		lbs
Fuel capacity		gals
Oil capacity		qts
Baggage capacity		lbs

Performance

Takeoff distance, ground roll	ft
Takeoff distance over 50 ft obstacle	ft
Max crosswind component	kts
Rate of climb, sea level	fpm
Cruise speed/endurance w/45-min rsv	
@ 75% power	kt/hr
@ optimum altitude	gph
@ 65% power	kt/hr
@ optimum altitude	gph
Max operating altitude (for pressurized a/c)	ft
Service ceiling (R/C = 100 fpm)	ft

Landing distance over 50 ft obstacle	ft
Landing distance ground roll	ft

#### Limiting and Recommended Airspeeds

$V_x$ (best climb angle)	kts
$V_y$ (best rate of climb)	kts
$V_A$ (design maneuvering)	kts
$V_{FE}$ (max flap extended)	kts
$V_{LE}$ (max gear extended)	kts
$V_{LO}$ (max gear operating)	kts
$V_{NO}$ (max structural cruising)	kts
$V_{NE}$ (never exceed)	kts
$V_{S1}$ (stall clean)	kts
$V_{SO}$ (stall in landing configuration)	kts